

Taking a sample of your lung with the guide of a CT scan (CT guided lung biopsy)

Radiology Department

Information for Patients

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Introduction

If you are an outpatient please read your appointment letter carefully. Check which hospital your appointment is at.

Please read all of this leaflet. It tells you about your scan. It has important information and instructions.

What is a lung biopsy?

A lung biopsy is a test to get a sample of lung tissue.

We use a special needle. The needle goes through the skin and into the lung. We get a small sample of lung tissue. We send the sample to someone who specialises in making a diagnosis from tissue samples (pathologist). They look at it closely under a microscope.

We use a CT scan during the biopsy. A CT scan uses X-rays to take detailed pictures of the inside of your body. These pictures help us guide the needle to the correct place in your lung.

Why do I need a lung biopsy?

You have had X-rays or scans that show an area of your lung may be abnormal.

The doctor in charge of your care feels that getting a sample of that part of lung will help make the right diagnosis. This will help them decide what treatment you might need.

The doctor who referred you for this test should have already talked to you about why you need it. They should also have told you if there are any other options instead of a biopsy.

**Health information and support is available at www.nhs.uk
or call 111 for non-emergency medical advice**

Visit www.uhleicester.nhs.uk for maps and information about visiting Leicester's Hospitals.
To give feedback about this information sheet, contact uhl-tr.informationforpatientsmailbox@nhs.net

How do I get ready for the procedure?

- Do not eat for 4 hours before your biopsy.
- You can have a few sips of clear fluids up to 2 hours before the biopsy.
- **If you are on medicines** from your doctor please keep taking them as usual. But do not take medicines that thin the blood.

If you have diabetes it is important to have a normal breakfast. You may need to change how you take your diabetes medicine. Please contact your usual diabetes care team for advice.

Some patients need to stay in hospital overnight after the biopsy. Please bring an overnight bag with you. This should have the things you need at night. This may include a toothbrush and toothpaste.

Important information about blood thinners

If you are taking medicine that thins the blood (anticoagulants or antiplatelets) you may need to stop taking it or take a different one for a few days.

A doctor or nurse from the clinic will tell you exactly what to do. Please follow their advice carefully.

We have sent you a leaflet called “**Checklist for CT-guided Biopsy Patients**” with this leaflet. It has more instructions about your medicines and when to start taking blood thinners again.

Common examples of these drugs include warfarin, clopidogrel (Plavix®), apixiban (Eliquis), edoxaban (Lixiana), rivaroxaban (Xarelto), ticagrelor (Brilinta), dalteparin, enoxaparin and heparin.

What happens before the procedure?

You may have some blood tests done before the biopsy unless they have been done quite recently. This is so we can check that you are not at a higher risk of bleeding,

What happens when I get to the hospital?

- We will book you in (admit you) to the angiography department. A nurse will help you get ready for your biopsy.
- We will ask you to take off some clothes and put on a hospital gown.
- We may put a small needle into a vein in your arm. This lets us give you medicines if needed.
- A doctor who specialises in X-rays and scans (radiologist) will talk to you about the biopsy. They will check that you know why the procedure is being done, the potential risks and the chances of success. You will sign a consent form to confirm this. This may be on an iPad or a paper form. **You should feel that you know enough before you sign the consent form.**
- Sometimes appointment and procedures can be delayed on the day. This can happen if another patient needs urgent care. We will try to keep you informed if there is a delay.

What happens during the procedure?

- We do the biopsy in a CT scanner in the Radiology (X-ray) Department.
- When you are ready, we will take you to the CT scanner.
- You will lie down on the CT scanning table. The radiologist will say what position you need to be in for your biopsy. It is important that you stay very still in this position until the procedure is finished. Please tell us if you are uncomfortable.
- Everything will be kept clean (sterile). We clean your skin with antiseptic. This may feel cold. We cover some of your body with sterile sheets.
- We inject some local anaesthetic into the skin and deeper tissues over the lung. This may sting to start with. This soon wears off and the skin should then feel numb.
- We put the biopsy needle through your skin and into your chest. You may feel a pushing sensation when the biopsy needle is put in. It should not be painful. Please tell us if you feel pain. We may give you more local anaesthetic.
- We use the CT scan to see where the biopsy needle is. We use this to help guide the biopsy needle into the abnormal lung.
- You will need to stay still during the procedure. You may feel some discomfort or pressure when the biopsy sample is taken. The biopsy needle may make a small clicking noise when it takes the sample.

The first part of the procedure when the equipment is being prepared may seem to take a while. Doing the biopsy itself does not take very long at all.

The biopsy needle often makes a small clicking noise when it takes the biopsy. The radiologist will need to take 2 to 3 samples.

How long will it take?

It usually takes about 30 to 45 minutes.

This includes the time to get ready and take the samples.

Who will be doing my procedure?

- A doctor who specialises in imaging and X-ray treatments (an interventional radiologist) will do the procedure.
- A radiographer will move and control the CT scanner.
- A nurse and maybe a healthcare assistant will work with the radiologist and care for you.
- A student may also be in the room to learn. If you do not want this, please tell us.

Will it hurt?

You may feel some pain or discomfort. When we inject the local anaesthetic, it will sting at first. This feeling soon wears off. The skin and deeper tissues should then feel numb.

You may feel a pushing sensation when the biopsy needle is put in place. This is usually done so quickly that it does not cause much discomfort.

If the procedure does get painful you should tell the person doing the biopsy. They may give you more local anaesthetic.

What happens after the procedure?

- We will take you to the angiography department.
- We will check your pulse, blood pressure and temperature. This is to make sure that there are no signs of any problems.
- You will usually have to stay there for a few hours until you have recovered.
- You will almost certainly have a chest X-ray before you go home. You will not be sent home until it is considered safe to do so.
- **Do not drive yourself home after the procedure.**

What if I need help and advice after the procedure?

If you have any problems relating to your biopsy procedure once you have left hospital please:

- contact your GP, or
- call NHS 111 for advice

You can also contact your lung nurse specialist. You will already have been given their contact details.

How do I care for my wound site?

Keep your wound dressing clean and dry for 3 days.

Remove your dressing after 3 days.

A small amount of bleeding or oozing in the first 24 hours is normal.

Contact your GP or the NHS helpline on 111 for advice if there is:

- swelling
- bleeding
- oozing around the biopsy site
- redness, warmth or soreness around the site

These may be signs of a problem or infection.

Are there any risks or complications?

All medical procedures carry some risk. We have included the most common risks and complications below. The chance of these happening is different for each person. We will talk to you about your risks before you sign the consent form.

- **Pain or discomfort.** You may have pain around the biopsy site for the first few hours. You can take your usual simple painkillers (such as paracetamol) for this.
- **Bruising.** You may have some soreness and bruising around the biopsy site.
- **Bleeding.** There is a small risk of bleeding. You may cough up some blood after the biopsy. Please do not be alarmed. It will stop after a short time.
- **Infection.** The risk of infection of the skin or deeper tissue is low. If the area around the biopsy site becomes hot and red or you feel unwell with 'flu-like' symptoms, this may mean you have an infection. **If this happens see your GP urgently or call the NHS helpline on 111 for advice.**
- **Air around the lung.** Air may get into the space around the lung. If this happens, the air may need to be drained. This is done using a needle or a small tube through the skin. This is only needed in less than 1 in 20 patients.

We will monitor you closely during and after the procedure. This helps us spot and treat any problems quickly.

Despite these possible complications a lung biopsy is normally very safe. It can save you from having a bigger procedure which would have higher risks.

How do I get the results?

It usually takes at least 2 working days for the full results to come back from the pathologist.

Your results will be sent to the doctor who referred you for the biopsy.

You may already have an appointment to see a doctor in an outpatient clinic.

If not, you may be given an outpatient appointment, or be contacted by phone with your results.

Do all biopsies give a diagnosis?

The radiologist doing your biopsy may be able to tell you if they have been able to get a good sample.

Lung biopsies get an answer in 9 out of 10 patients.

There is a small risk (about 1 in 10 patients) that the biopsy sample may not be enough for testing or may not give a clear diagnosis. In this case you may need to have the procedure again. If this happens your doctor will talk to you about your options.



What are the risks from exposure to radiation in this procedure?

The main risk from exposure to X-rays is a higher risk of getting a cancer in the future. This risk is thought to be very small.

We are all exposed to natural background radiation every day of our lives. This comes from the sun, the food we eat, and the ground. Each test that uses X-rays gives a dose on top of this natural background radiation.

The risks of radiation are slightly higher for an unborn child. We must ask:

- patients age **10 to 15 years registered female**, and
- **all patients aged 16 to 55 years**

about their periods and/or if they could be pregnant.

The benefits of having this procedure are likely to outweigh any possible risks. The risks of not having the procedure could be greater. We try to keep your exposure to X-rays as low as possible.

What if I need to talk to someone?



If you have any questions or concerns, or cannot make the appointment:

Please call the Radiology department on **0116 258 8765** and select **option 7**. Monday to Friday 9am to 5pm, but not on bank holidays.

If you have any problems after the procedure please speak to the staff in the angiography department.

If you have any problems relating to your biopsy procedure once you have left hospital, please contact your GP for advice or call the NHS helpline on 111.

Any questions?

If you have any questions you can write them down. This is to remind you to ask when you come for your treatment.

اگر آپ کو یہ معلومات کسی اور زبان میں درکار ہیں، تو براہ کرم مندرجہ ذیل نمبر پر ٹیلی فون کریں۔
على هذه المعلومات بلغةٍ أخرى، الرجاء الاتصال على رقم الهاتف الذي يظهر في الأسفل
જો તમને અન્ય ભાષામાં આ માહિતી જોઈતી હોય, તો નીચે આપેલ નંબર પર કૃપા કરી ટેલિફોન કરો

ਜੇ ਤੁਸੀਂ ਇਹ ਜਾਣਕਾਰੀ ਕਿਸੇ ਹੋਰ ਭਾਸ਼ਾ ਵਿਚ ਚਾਹੁੰਦੇ ਹੋ, ਤਾਂ ਕਿਰਪਾ ਕਰਕੇ ਹੇਠਾਂ ਦਿੱਤੇ ਗਏ ਨੰਬਰ 'ਤੇ ਟੈਲੀਫੋਨ ਕਰੋ।

Aby uzyskać informacje w innym języku, proszę zadzwonić pod podany niżej numer telefonu

If you would like this information in another language or format such as EasyRead or Braille, please telephone 0116 250 2959 or email uhl-tr.equalitymailbox@nhs.net